

**CONFIDENTIAL** ~~SECRET~~**S-E-C-R-E-T****Service Contract  
Work Order Requests**

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8-075

Date: 21 April 1958

TO : Chief, Research and Development Branch, OC-E

FROM: Chief, ELINT Activities Branch, OC-SP

1. Description of work requested: Fabrication of thirty (30) each, highly stable 1000 cycle reference oscillators. The units should be completely transistorized, and use a high precision tuning fork as the frequency determining element. The oscillators should be battery-operated by either a dry cell or mercury cell and should have a feature to permit remote operation.

2. List drawings, sketches, or samples accompanying requests:

- a. Electrical and mechanical specifications
- b. Wiring diagram (electronics)
- c. Mechanical drawings and parts list
- d. Sample oscillator

25X1

These items are available at 1414 Curie Hall.

Requested by

Chief, SP/KA

Contractor's Price estimate \$ 11629.00

25X1

Contractor's Delivery estimate 19 August 1958 days after receipt of order.

Estimate accepted by

Work Order No. 3 issued

Contractor

For further information, please contact  
1414 Curie Hall**S-E-C-R-E-T**

25X1

Addressee: 1 copy only

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Electrical Specifications - 1 kcs. Reference Oscillator:

1. Power Source: Z cell or mercury cell RM-5012R
2. Battery Polarity: Not applicable
3. Output Impedance: 2000 ohms
4. Stability: 1 part in 10,000 over specified temperature range
5. Output level: 35 mv. across 2,000 ohms (earphone)  
100 mv. across 5,000 to 100,000 ohms (recorder)
- 6
6. Temperature Range:  $-40^{\circ}$  to  $+40^{\circ}$  C.
7. Warm-up Time: 45 seconds
8. Local Controls: Power - on/off switch  
Output - push button
9. Remote Controls: Power - on/off  
(not furnished) Output - push button  
Remote battery

Physical Specifications:

1. Dimensions (overall)  
Length -  $4\frac{5}{16}$  in.  
Width -  $2\frac{1}{4}$  in.  
Height -  $1\frac{1}{32}$  in.
2. Weight - 14 oz. including battery

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FABRICATION OF A 1000 CYCLE REFERENCE OSCILLATOR

I. Requirements

1. General. This requirement demands a highly stable 1000 cycle reference oscillator. The units shall be completely transistorized, and use a precision tuning fork as the frequency determining element. The oscillators shall be battery operated by either a dry cell or mercury cell and should have a feature to permit remote operation.

2. Electrical.

- a. Power source: Z cell or RM-500<sup>1</sup>2R mercury cell.
- b. Battery polarity: none
- c. Output impedance: 2000 ohms.
- d. Stability: 1 part in 10,000 over the specified temperature range.
- e. Output level: 35 mv<sup>OK (rms) - 7.</sup> across 2,000 ohms (earphones)  
100 mv across 5000 to 100,000 ohms (recorder).
- f. Temperature range: -40 degrees to +40 degrees centigrade.
- g. Warm up time: 45 seconds.
- h. Local controls: Power - on/off switch  
Output - push button.

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1. Remote controls: Power - on/off  
(not furnished)

Output - push button

Remote battery.

3. Physical.

- a. Dimensions: Length, 4-5/16"

Width, 2-1/4"

Height, 1-1/32"

- b. Weight: 14 oz., including battery.

- II. Deliverable items.

A quantity of thirty (30) reference oscillators shall be fabricated. If necessary, a revised parts list will be submitted to the customer.

- III. Government Furnished Equipment.

- a. Electrical and mechanical specifications.

- b. Schematic diagrams.

Mechanical drawings and parts list.

- d. Sample oscillator.

- IV. Instructions to the Contractor.

The contractor will submit a letter of proposal to the customer including a cost breakdown estimate and delivery date (preferably, on or by 30 June 1958). This equipment is UNCLASSIFIED, however, its association with the contract or the contracting organization is classified SECRET.

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